June 2004
Tinker View Acres Update
SERVING OUR NEIGHBORS

Installation of the permeable barrier begins

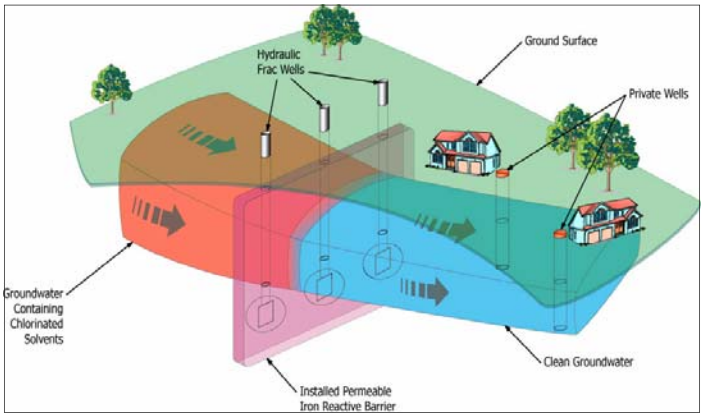
Progress continues with clean-up activities for the groundwater near the Tinker View Acres neighborhood.

The first of its kind at Tinker, the Permeable Reactive Barrier design specifications are custom made for particular types of contamination as a result of an intensive study of underground water and rock formations.

This site characterization is included as part of the Corrective Measures Study (CMS), which recommends and describes how the clean-up process will occur.

The CMS was reviewed and approved by the Oklahoma Department of Environmental Quality.

The information in the study includes how fast the groundwater is moving, what direction it is moving and what methods are best suited for the clean-up process. Critical information regarding underground rock formations help hydrologeologists determine the best length, height, and depth of the wall.



The diagram above shows how the PRB will clean the water as it comes into contact with permeable iron wall. The water must only contact the porous iron for a few hours to be effective.

Actual site preparation for the PRB began May 10 with placement of a gravel-covered access road to reduce dust from construction equipment as work on the PRB is done. The PRB is expected to be operational by the end of July.

In late May three additional monitoring wells were installed to gauge future effectiveness of the PRB as groundwater passes through and is cleaned by tiny iron particles which destroy contaminants in the groundwater upon contact.

The technique of destroying contamination in-place is called in-situ remediation.

The Tinker PRB is being installed using a new method called “azimuth controlled vertical hydraulic fracturing”, which is patented by GeoSierra LLC. This complex engineering term simply means engineers will use specialized equipment to inject biodegradable gel mixed with iron filings under pressure through 34 boreholes. The space between each of the boreholes is fractured, creating a weakness in the rock and soil allowing the iron to create a wall, or barrier, across the contamination zone. The gel then breaks down and leaves a permeable iron wall which cleans the ground water as it passes through. When complete, contaminated groundwater will flow through this barrier and exit as clean water.

Scott Bowen, Tinker hydrogeologist and PRB project manager, works closely with GeoSierra Hydrogeologist Bill Sharpe and Site Manager Chad Givens while inspecting borehole casings with a down hole camera to ensure injection tubes are properly aligned.

Monitoring Wells and Private Well Sampling

Sampling of wells in TVA continues on a regular basis. The next round of sampling is planned for this month. Results will be briefed at Tinker’s Community Advisory Board meetings and reports placed in the Information Repository at the Midwest City Public Library.

The information above is current as of June 2004. Please feel free to contact us with your questions or concerns (see reverse side for contact information).

Contact Information:

Office of Public Affairs
Attn: Mr. Brion Ockenfels
3001 Staff Drive, Ste. 1AG78A
Tinker AFB OK, 73145-3010
Phone: (405) 739-2027

TVA Web Site:

http://www-ext.tinker.af.mil/EM/TVA/tva.htm

E-Mail:

tva.feedback@tinker.af.mil

Community Advisory Board (CAB) Meeting

20 July 2004
19 October 2004
6:00 p.m.

Midwest City Public Library
Room A
8143 E. Reno Blvd.
Midwest City OK. 73110
(405) 732-4828

OC-ALC/EM
7701 ARNOLD STREET STE 204
TINKER AFB OK 73145-9100

FOR OFFICIAL BUSINESS ONLY
DM-O